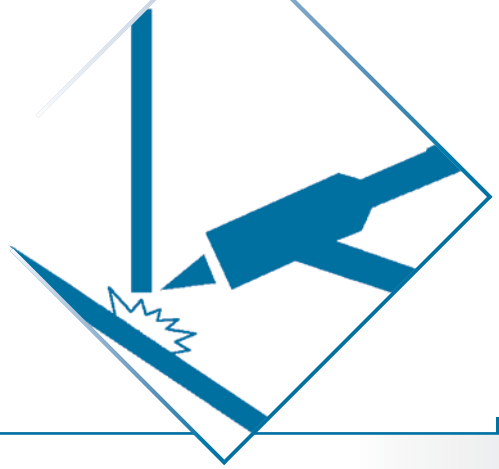
CEMONT



CHAPTER 4

TIG welding

Introduction pages 4-2 & 4-3

WELDING POWER SOURCES

DC power sources

- **SMARTY 160 POWER** page 4-5
- **SMARTY 180 / 220 FORCE** page 4-6
- **SMARTY TX 250** page 4-7
- **SMARTY 300 XL (W)** page 4-8 & 4-9

AC/DC power sources

- **SMARTY TX 160 Alu** page 4-10
- **SMARTY TX 220 Alu** page 4-11
- **SMARTY 300 Alu AC/DC W** page 4-12 & 4-13

TORCHES

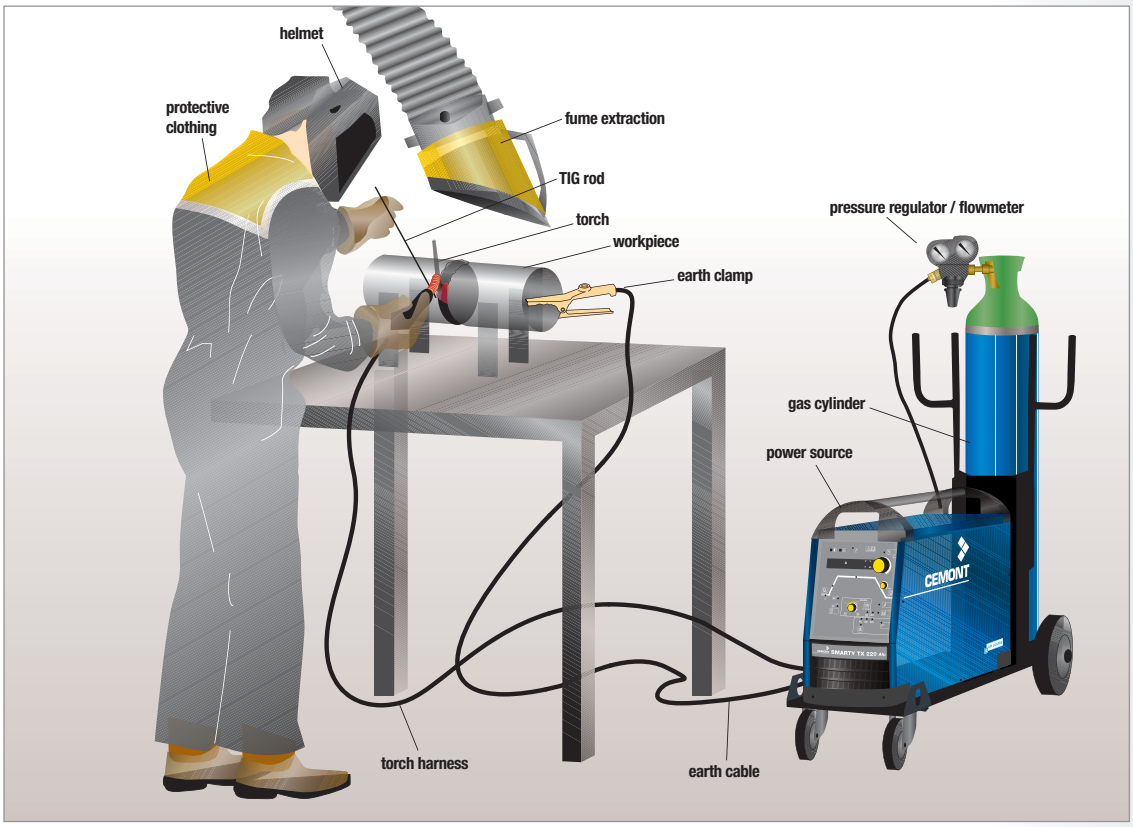
- **WTT2 TIG welding torches** page 4-14
- **Wear parts for TIG torches** page 4-15

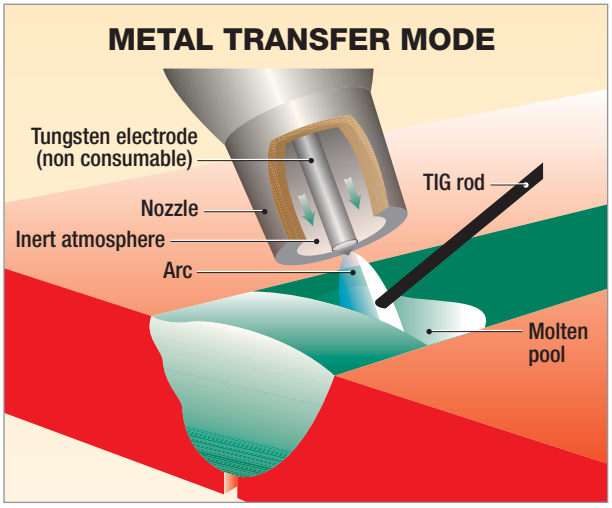
Options and accessories for TIG welding

Tungsten electrodes, Remote control, Trolleys, MMA accessories page 4-16

TIG welding

A TYPICAL MANUAL TIG WELDING INSTALLATION





TIG Welding Process

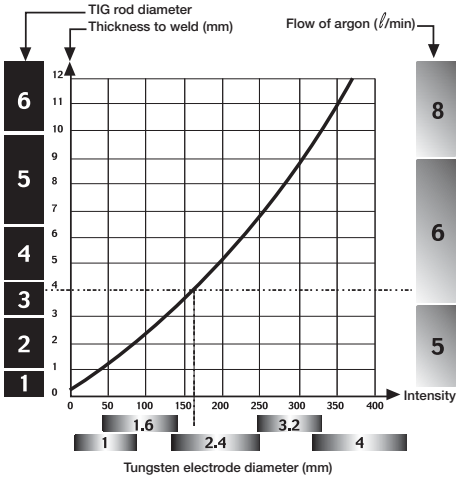
An electric arc is created between a non consumable tungsten electrode and the piece to be welded.

The electrode, the filler metal, the molten pool and the neighbouring zones are protected against atmospheric oxygen and nitrogen by an inert gas shield, generally argon.

Usually, this process is called “Tungsten Inert Gas or TIG”.
It is also known as “Gas Tungsten Arc Welding or GTAW”.

CEMONT

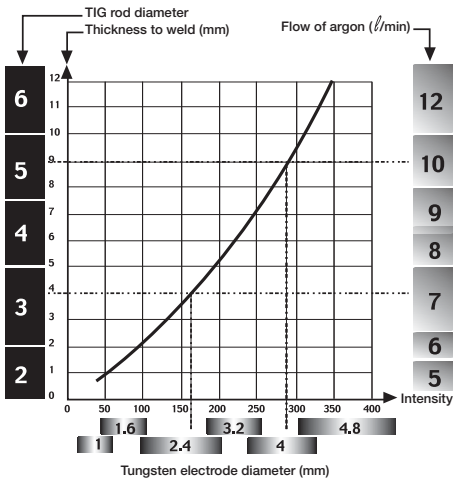
Welding selection table TIG stainless steel



Example on Fig. 1

Thickness to weld: 4 mm
TIG rod diameter: 3 mm
Electrode diameter: 2.4 mm
Welding current: 160 A
Flow of argon: 6 l/min

Welding selection table TIG aluminium



Example on Fig. 2

Thickness to weld: 9 mm
TIG rod diameter: 5 mm
Electrode diameter: 4 mm
Welding current: 280 A
Flow of argon: 10 l/min

LEXICON

TIG WELDING

Pre-gas: Torch and harness are purged before striking.

Up slope function: Allows a progressive increase of the welding current.

Down slope function: Prevents a crater at the end of the welding cycle and prevents the risk of cracking particularly light alloys.

Post-gas: Protection of the work piece and the electrode after welding is completed.

Balance: Improves, the penetration during AC welding or the cleaning phase.

Pulsed Welding: Makes positional welding and welding of thin plate easier, and prevents the collapse of the molten pool. Allows a regular deposit of filler metal and improves the penetration.

Tacking: Allows quick tacking of the joint before welding.

TIG range

DC

Steel & Stainless steel

SMARTY	3 ph			TX 250	300 XL (W)
SMARTY FORCE	1 ph	180 FORCE	220 FORCE		
SMARTY	160 POWER				
Welding current	150 A	160 A	220 A	250 A	300 A

AC/DC

Steel, Stainless steel + Aluminium

SMARTY	1 ph TX 160 ALU	TX 220 ALU	300 AC/DC ALU
Welding current	150 A	200 A	300 A

AIR LIQUIDE WELDING

SMARTY 160 POWER

The SMARTY 160 POWER is a power source for TIG DC welding of carbon and stainless steels in the field of maintenance.

Features and product advantages:

- **Power supply:** 230 V single-phase.
- **Lightweight:** for easy transportation.
- **Easy to use:** simple welding cycle (pregas, down slope postgas).
- **Motor generator compatible:** use with long primary cable up to 70 m in 3 x 2.5 mm² section.
- **Powerful:** high duty cycle at 60% - 40°C.
- **Inverter tecnology:** for a perfect control of the welding current.
- **Versatile:** can be used for TIG welding as well as MMA welding.
- **Practical:** easy arc striking due to the HF and the 2T/4T devices.

2011-493

Standards
EN 60974-1
EN 60974-10
EN 61000-3-12

POWER

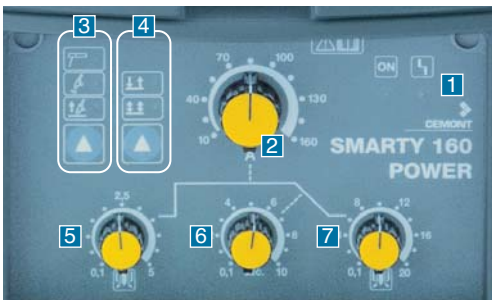
SAVE ENERGY

WARRANTY 2 YEARS

16A plug

MOTOR GENERATOR COMPATIBLE

LONG: 70 m
SECTION: 3 x 2.5 mm²



2011-492

1. Safety and operation indication
2. Main current regulation
3. Process selection (MMA / TIG HF / TIG Lift)
4. Trigger cycle selection 2T / 4T
5. Pre-gas time selection
6. Slope-down time selection
7. Post-gas time selection

TECHNICAL CHARACTERISTICS:

		SMARTY 160 POWER
Single-phase input voltage		230 V +/- 20% 50/60 Hz
Input power		5KVA -4.9KW
Max input current		27A (MMA) 20A (TIG)
Effective input current		12 A (TIG)
Open circuit voltage		50 V
Welding current range		10-160 A
Duty cycle at 40 °C	at 35%	160 A
	at 60%	140 A
	at 100%	120 A
Protection index		IP 23 S
Dimensions		205 x 345 x 460 mm
Weight		9.5 kg
Connector size		13 mm

• For torches
see pages 4-10
& 4-11

Delivered equipped with:

- electric primary cable,
- earth cable with clamp (3 m),
- gas hose,
- safety instructions,
- user manual.

TO ORDER:

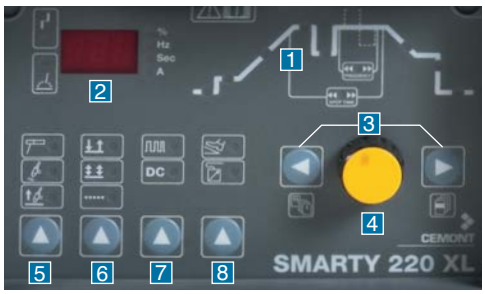
Power source only	**W000273519**

SMARTY 180 / 220 FORCE

The SMARTY 180 FORCE and 220 FORCE are portable power sources for TIG welding with direct current, for professional use. These power sources can serve many applications thanks mainly to the “pulse” functions for working thin surfaces and “2 current levels” for work in position. The power sources can be used with up to 70 m primary cables.

Features and product advantages:

- **Power supply:** 230 V single-phase - 12 A.
- **Tolerant to power oscillations:** 230 V ± 20%.
- **Digital display:** % / Hz / Sec / A.
- **Yield:** duty ratio 60% at 40 °C.
- **Versatile:** TIG DC / TIG DC pulse/ MMA.
- **Technology:** use at 2 current levels.
- **Professional:** protection class IP 23.
- **Remote control:** easy control from a distance.
- In option can be equipped with an autonomous **cooling unit** FREEZTIG.
- **30 progams storage.**



1. Complete welding cycle.
2. Digital display.
3. Cycle navigator and program storage/recall.
4. Control knob.
5. Mode: EE / TIG HF / TIG LIFT.
6. 2T / 4T / Point selector.
7. Process selection: TIG DC/Pulse.
8. Remote/pedal control selection.

TECHNICAL CHARACTERISTICS:

		SMARTY 180 FORCE	SMARTY 220 FORCE
Power supply		230 V single-phase	
Input power		3.2 kVA - 3.1 kW (TIG)	4.9 kVA - 4.8 kW (TIG)
Max input current		14 A (TIG)	21 A (TIG)
Effective input current		11 A (TIG)	12 A (TIG)
Open circuit voltage		50 V	50 V
Welding current range		5 - 160 A	5 - 220 A
Duty cycle at 40 °C	at 35%	160 A	220 A
	at 60%	140 A	180 A
	at 100%	130 A	150 A
Torch connector		S	
Size of connector		13 mm	
Protection class		IP 23	
Dimensions		205 x 345 x 460 mm	
Weight		9.5 kg	

MOTOR GENERATOR COMPATIBLE

POWER

SAVE ENERGY

LONG: 70 m
SECTION: 3 x 2.5 mm²

16A plug

• For torches
see pages 4-10
& 4-11

TO ORDER:

Power source only	W000382582	W000382583
Option		
Remote control	W000242069	
Pedal	W000241602	
FREEZTIG cooling unit	W000382728	
Universal trolley	W000375730	

Delivered equipped with:

- power cable with 16 A plug,
- fitted earth cable,
- gas pipe,
- safety user and maintenance manual.

SMARTY TX 250

WARRANTY 2 YEARS

The SMARTY TX 250 is a portable TIG DC power source designed for light and industrial applications; with “pulsed” function for welding thin plate and also “2 current levels” mode for welding in position.

Features and product advantages:

- **Powerful:** 250 A at 40% duty cycle at 40 °C.
- **Digital diplay:** A / V / Sec / %.
- **Versatile:** TIG DC / pulsed TIG DC / MMA.
- **Technical:** complete TIG welding cycle.
- **Safe:** protection class IP23.
- **Remote control:** remote adjustment flexibility (option).

TECHNICAL

Standards
EN 60974-1
EN 60974-10

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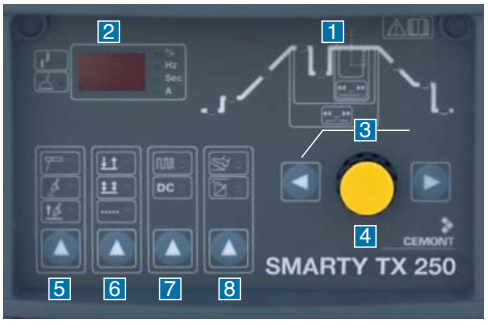


2006-889_ret

1 Complete welding cycle.
2 Digital display.
3 Cycle selection.
4 Parameter adjustment.
5 Modes: MMA/TIG HF/TIG LIFT.
6 Selection: 2T/4T/Point.
7 TIG current: smooth or pulsed.
8 Selection for local / remote control.

TECHNICAL CHARACTERISTICS:

		SMARTY TX 250
Input voltage		400 V three-phase (50/60 Hz)
Input power		8.7 kVA - 6.2 kW (TIG)
Max input current		13 A (TIG)
Effective input current		10 A (TIG)
Open circuit voltage		107 V
Welding current range		5 - 250 A
Duty cycle at 40 °C	at 40%	250 A
	at 60%	210 A
	at 100%	180 A
Connector size		9 mm
Protection index		IP 23
Dimensions		250 x 460 x 450 mm
Weight		18 kg
Torch connection		S

• For torches
see pages 4-10
& 4-11

TO ORDER:

Power source only	**W000260031**
Options	
Remote control	**W000242069**
Foot control	**W000241602**

Delivered equipped with:

- primary cable 5 m,
- earth cable 3 m,
- gas hose 2 m,
- safety instructions,
- user manual.

PULSED TIG DC WELDING

SMARTY 300 XL (W)

NEW

SMARTY 300 XL (W) with inverter technology is your welding expert in workshops or on-site applications. Powerful, rugged and easy to use installations. HF striking and excellent stability. High quality MMA welding performance with rutile, basic and cellulosic electrodes. Complete welding cycle: pre/post-gas, up/down slope adjustment current with setting.

WARRANTY 3 YEARS

Standards
EN 60974-1
EN 60974-10

Features and product advantages:

- **Powerful:** welding current up to 300 A with 60% duty cycle (@40 °C).
- **Parameters memorisation.**
- **Air or cooled versions.**
- **Digital display:** A/V/Sec/%.
- **Versatile:** TIG DC, Pulsed TIG and MMA.
- **Technological:** bi-level function.
- **Remote control:** on demand.

CELLULOSIC ELECTRODE

WATER COOLED CONTIGURATION

AIR COOLED VERSION

Three phase

2011-103_r

2011-131_r

TECHNICAL CHARACTERISTICS:

		SMARTY 300 XL
Power supply (three phase)		400 V + 20% - 15% 50/60 Hz
Maximal input current		8.2 A (TIG) - 8.9 A (MMA)
Effective input current		4.9 A (TIG) - 6.8 A (MMA)
Input power at maximal welding intensity		7.9 kW
Open circuit voltage		80 V
Welding current range		5-300 A TIG / 10-250 A MMA
Duty cycle @ 40 °C	at 30%	300 A
	at 60%	230 A
	at 100%	200 A
Protection class		IP 23C
Dimensions		180 x 390 x 500 mm
Weight		22 kg
Insulation index		H

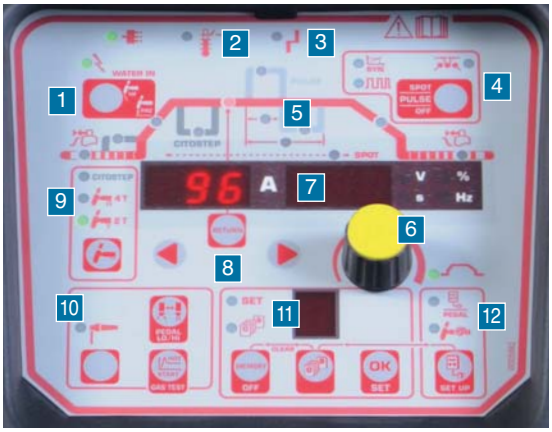
• For torches
see pages 4-14 & 4-15
• For filler metal (rods)
see pages 6-14

Delivered equipped with:

- primary cable,
- earth cable,
- gas hose,
- safety instructions,
- user manual.

AIR LIQUIDE WELDING

SMARTY 300 XL (W)



2011-117_ret

2011-006_r

1. Key for TIG HF/ TIG Lift selection.
2. Thermal safety indicator.
3. Supply voltage defect indicator.
4. Pulsed TIG / Synergic pulsed TIG / Spot TIG selection.
5. Drawing of the welding cycle.
6. Welding parameters adjustment.
7. Display of parameters.
8. Welding parameter selection key.
9. 2T / 4T / bi-level torch cycle selection.
10. MMA welding selection.
11. Memorization parameters selection.
12. Local/remote control selection.

To order

Description	Cat. nr	SMARTY 300 XL air cooled	SMARTY 300 XL W water cooled
SMARTY 300 XL (W) with primary cable, equipped earth cable and gas hose	W000377014	•	•
COOLERTIG II DC cooling unit	W000279722		•
ADD ONS			
Manual remote control RC1 - 5 meters long	W000263311	•	•
Manual remote control RC1 - 10 meters long	W000270324	•	•
Foot remote control FP1 - 5 meters long	W000263313	•	•
Trolley for power source	W000375730	•	•
Torch WTT2 26 RL C5B - 4 meters long Other length available	W000278890	•	
Torch WTT2 26 EB C5B - 4 meters long Other length available	W000278887	•	
Torch WTT2 18W RL C5B - 4 meters long Water cooled - Other length available	W000278898		•
Torch WTT2 18W EB C5B - 4 meters long Water cooled - Other length available	W000278896		•
Kit MMA 35C50 Welding cables equipped with earth clamp and electrode holder	W000011139	•	•

CEMONT

Power source inverter technology for TIG AC/DC welding on steel, stainless steel and aluminium. Single-phase input voltage.

AC/DC TIG POWER SOURCE

SMARTY TX 160 Alu

WARRANTY 2 YEARS

The SMARTY TX 160 Alu is a TIG power source specially designed for maintenance welding on steel, stainless steel and aluminium.

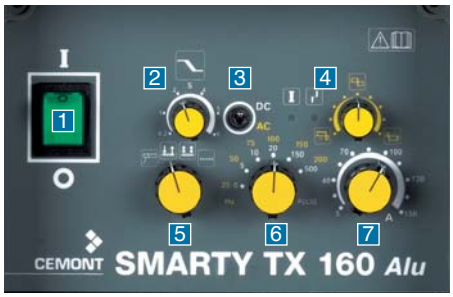
Features and product advantages:

- **Input voltage:** 230 V single-phase.
- **Light and compact:** easy transport and storage.
- **Simple:** clear welding cycle (pre-gas / down slope / post-gas).
- **Powerful:** duty cycle at 60% at 40 °C.
- **Inverter technology:** precise adjustment of the welding current.
- **Versatile:** for TIG AC/DC and MMA electrode welding.
- **Practical:** easy adjustment. Remote control.

GENERAL PURPOSE

Standards
EN 60974-1
EN 60974-10

2010-404



2006-403

1 Switch on / off.
2 Slope down.
3 Selection AC/DC current.
4 Balance adjustment (AC).
5 Welding process selection TIG 2T / TIG 4T / MMA.
6 Pulsed frequency adjustment.
7 For welding current adjustment.

TECHNICAL CHARACTERISTICS:

		SMARTY TX 160 Alu
Input voltage		230 V single-phase (50/60 Hz)
Max input current		23 A (TIG)
Effective input current		13 A (TIG)
Open circuit voltage		85 V
Welding current range		5 - 150 A
Duty cycle at 40 °C	at 30%	150 A (TIG) - 130 A (MMA)
	at 60%	120 A (TIG) - 100 A (MMA)
	at 100%	100 A (TIG) - 80 A (MMA)
Connector size		13 mm
Protection index		IP 23
Dimensions		260 x 460 x 450 mm
Weight		22 kg
Torch connection		S

• For torches
see pages 4-10 & 4-11

TO ORDER:

Power source only	**W000056036**
Options	
Remote control	**W000242069**
Foot control	**W000241602**

Delivered equipped with:

- electric primary cable,
- earth cable with clamp,
- gas hose,
- safety instructions,
- user manual.

AIR LIQUIDE WELDING

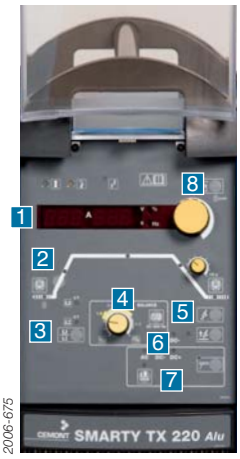
SMARTY TX 220 Alu

WARRANTY 2 YEARS

Designed for both workshop and outdoor working conditions, the SMARTY TX 220 Alu meets the most demanding applications on site and in workshop (maintenance) for all kinds of materials.

Features and product advantages:

- **Single-phase input voltage:** 230 V ± 10%.
- **Inverter technology:** precise adjustment of the welding current.
- **Large digital display:** for accurate adjustment and clarity.
- **Powerful:** duty cycle 60% at 40 °C.
- **Compact:** for outdoor applications.
- **Intelligent balance:** for aluminium applications, simplified adjustment of cleaning and penetration steps, according to the tungsten electrode diameter.



2006-675

1 Digital display (U/I).
2 Pre-gas adjustment.
3 Selection mode 2T / 4T.
4 Cleaning / penetration balance (AC).
5 HF TIG / LIFT starting.
6 Pulsed frequency (AC).
7 Selection MMA (with DC+ / DC- / AC / intermittent arc).
8 Parameter adjustment.

ON SITE WELDING

Standards
EN 60974-1
EN 60974-10

2006-676

MOTOR GENERATOR COMPATIBLE

TECHNICAL CHARACTERISTICS:

		SMARTY TX 220 Alu
Input voltage		230 V single-phase (50/60 Hz)
Max input current		19 A
Effective input current		16 A
Open circuit voltage		70 V
Welding current range		3-200 A DC - 10-200 A AC
Duty cycle at 40 °C	at 30%	200 A
	at 100%	150 A
Connector size		9 mm
Protection index		IP 23
Dimensions		540 x 260 x 510 mm
Weight		30 kg
Torch connection		S or C5B

• For torches
see pages 4-10 & 4-11

TO ORDER:

Power source only		**W000263003**
Options		
Remote control	**5 m**	**W000263312**
	10 m	**W000270325**
Foot control		**W000263314**
Trolley		**W000263308**

Delivered equipped with:

- electric primary cable,
- earth cable with clamp,
- gas hose with quick couplings,
- safety instructions,
- user manual.

SMARTY 300 Alu AC/DC W

NEW

WARRANTY 3 YEARS

Standards
EN 60974-1
EN 60974-10

Power source with inverter technology for industrial TIG welding in alternating or direct current.
SMARTY 300 Alu AC/DC W with inverter technology is your welding expert in workshops or on-site applications. This equipment is versatile (TIG welding of steel, stainless steel and aluminium), powerful, rugged and easy to use. Pulsed TIG, point and 2T/4T. HF striking and excellent stability.
High quality MMA welding performance.
Complete welding cycle: pre/post-gas, up/down slope adjustment current setting. Water cooled installation.

Features and product advantages:

- **Power supply:** 400V +/-10% - Three phase.
- **Inverter technology:** perfect control of the welding current.
- **Digital display:** accurate setting and optimal visibility.
- **Powerful:** high duty cyvle 300 A @ 40% (40 °C).
- **Versatile:** TIG AC, TIG DC, Pulsed DC TIG, MMA.
- **Smart balance:** the percentage of penetration or cleaning can be set according to the type of infusible electrode.
- **Parameters memorisation.**

Three phase

2010-369_r

TECHNICAL CHARACTERISTICS:

		SMARTY 300 Alu AC/DC
Power supply (three phase)		400 ± 10% 50-60 HZ
Maximal input current		7.9 A (TIG) - 8.9 A (MMA)
Effective input current		4.4 A (TIG) - 5 A (MMA)
Input power at maximal welding intensity		7.9 kW (TIG) - 8.9 kW (MMA)
Open circuit voltage		70 V
Welding current range		3 - 300 A TIG / 10 - 250 A MMA
Duty cycle @ 40 °C	at 40%	300 A
	at 60%	230 A
	at 100%	190 A
Protection class		IP 23C
Dimensions		195 x 440 x 505 mm
Weight		25 kg
Insulation index		H

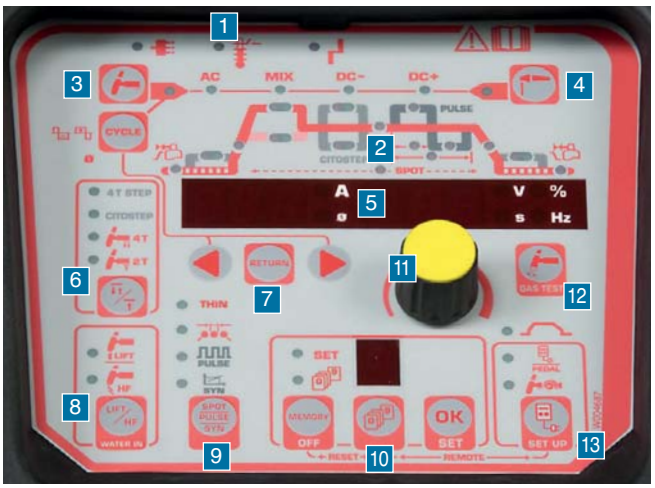
• For torches
see pages 4-14 & 4-15
• For filler metal (rods)
see pages 6-14

Delivered equipped with:

- primary cable,
- earth cable,
- gas hose,
- safety instructions,
- user manual.

AIR LIQUIDE WELDING

SMARTY 300 Alu AC/DC W



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2011-006_r

1. Safety and operation indicators.
2. Welding cycle layout.
3. TIG operation selection.
4. MMA operation selection.
5. Parameter value display.
6. Torch cycle selection.
7. Parameter selection.
8. Striking selection HF/ Lift.
9. Pulse / Spot selection.
10. Program management.
11. Main regulation knob.
12. Gas test.
13. Remote control operations.

To order

Description	Cat. nr
SMARTY 300 Alu AC/DC with primary cable, equipped earth cable and gas hose	W000377013
COOLERTIG III AC/DC cooling unit	W000278471
ADD ONS	
Manual remote control RC1 - 5 meters long	W000263312
Manual remote control RC1 - 10 meters long	W000263314
Foot remote control FP1 - 5 meters long	W000263309
Trolley for power source + cooling unit and gas cylinder	W000375730
Torch WTT2 18W RL C5B - 4 meters long Water cooled - Other length available	W000278898
Torch WTT2 18W EB C5B - 4 meters long Water cooled - Other length available	W000278896
Kit MMA 35C50 Welding cables equipped with earth clamp and electrode holder	W000278390

WTT2 TIG torches

Simplicity and reliability

TIG torches which are reliable, flexible and use common wear parts.
Connections and handles for all applications.

Handle

Connections

	C5B	S	V
Air cooled	Connector Ø: 13 mm 2010-693_r	Connector Ø: 13 mm 2010-692_r	Connector Ø: 9 mm for 9V and 17V Connector Ø: 13 mm for 26V 2010-694_r
Water cooled	Connector Ø: 13 mm 2010-691_r	Connector Ø: 13 mm 2010-690_r	**ADAPTATOR:** For connection of a diameter 9 mm torch on a diameter 13 mm power source socket : **W000306139**

TO ORDER:

			Air cooling					
			WTT2 9		WTT2 17		WTT2 26	
Duty cycle at 40 °C		60%	80 A		100 A		130 A	
		35%	110 A		135 A		180 A	
Fitted with		Cap	Long		Long		Long	
		Nozzle	Ø 10 mm		Ø 10 mm		Ø 12 mm	
		Electrode	Ø 1.6 mm		Ø 2.0 mm		Ø 2.4 mm	
			4 m	8 m	4 m	8 m	4 m	8 m
Handle	RL	S	W000278878	W000278923	W000278883	W000278918	W000278888	W000278914
		C5B	W000278879	W000278922	W000278884	W000278917	W000278890	W000278913
	EB	S	W000278877	W000278929	W000278881	W000278920	W000278886	W000278916
		C5B	W000278875	W000278926	W000278882	W000278919	W000278887	W000278915
	V	V	W000278876	-	W000278880	-	W000278885	-

			Water cooling			
			WTT2 20 W		WTT2 18 W	
Duty cycle at 40 °C		100%	200 A		320 A	
		60%	250 A		350 A	
Fitted with		Cap	Long		Long	
		Nozzle	Ø 12 mm		Ø 12 mm	
		Electrode	Ø 2.4 mm		Ø 2.4 mm	
			4 m	8 m	4 m	8 m
Handle	RL	S	W000278893	W000278906	W000278897	W000278900
		C5B	W000278894	W000278905	W000278898	W000278899
	EB	S	W000278891	W000278911	W000278895	W000278902
		C5B	W000278892	W000278909	W000278896	W000278901

For a better gaseous protection, dedicated parts (diffusers + nozzles) can be used.

WTT2
9V / 9 (RL-EB) / 20W (RL-EB)

		Ø	Cat. nr
1-1	Back cap - Short		W000306398
1-2	Back cap - Medium		W000306400
1-3	Back cap - Long		W000306402
2	Back cap O-ring		W000306404
3	Torch body WTT2 9V		W000306473
	Torch body WTT2 9		W000306471
	Torch body WTT2 20W		W000306488
4	Insulating ring		W000306396
5	Collet	1.0	W000306406
		1.6	W000306407
		2.0	W000306408
		2.4	W000306409
		3.2	W000306410
6-1	Collet body	1.0	W000306376
		1.6	W000306377
		2.0	W000306378
		2.4	W000306455
		3.2	W000306379
7-1	Nozzle standard short 4	6.4	W000306417
	Nozzle standard short 5	8.0	W000306418
	Nozzle standard short 6	9.6	W000306419
	Nozzle standard short 7	11.2	W000306420
	Nozzle standard short 8	12.8	W000306421
	Nozzle standard short 10	16.0	W000306422
7-2	Nozzle standard long 3L	4.8	W000306456
	Nozzle standard long 4L	6.4	W000306457
	Nozzle standard long 5L	8.0	W000306458
	Nozzle standard long 6L	9.6	W000306459
6-2 Gas Lens	Collet body for Gas Lens	1.0	W000306385
		1.6	W000306386
		2.0	W000306460
		2.4	W000306387
		3.2	W000306388
7-3 Gas Lens	Nozzle Gas Lens 4 GL	6.4	W000306429
	Nozzle Gas Lens 6 GL	9.6	W000306431
	Nozzle Gas Lens 7 GL	11.2	W000306432
	Nozzle Gas Lens 8 GL	12.8	W000306433

As standard for all models
As standard only for WTT2 9 EB / 9 RL / 9V
As standard only for WTT2 20W EB / 20W RL

WTT2
17V / 17 (RL-EB)
26V / 26 (RL-EB)
18W (RL-EB)

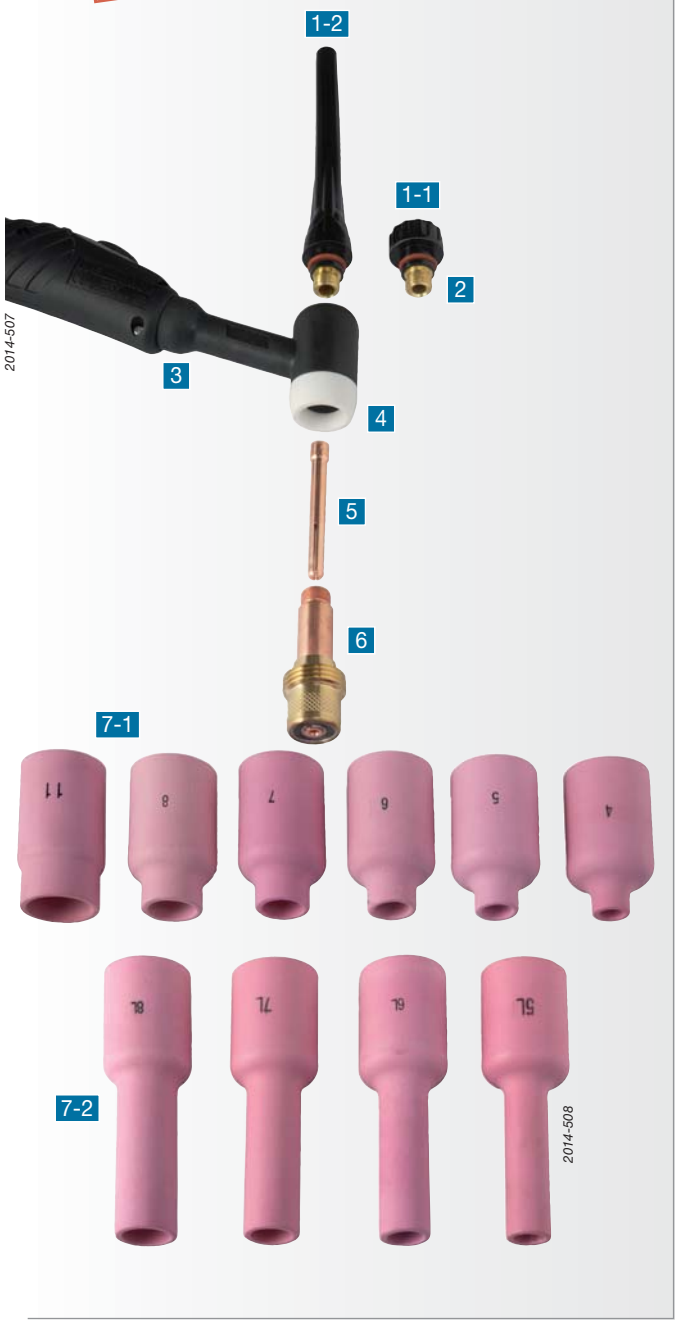
		Ø	Cat. nr
1-1	Back cap - Short		W000306399
1-2	Back cap - Long		W000306403
2	Back cap O-ring		W000306405
3	Torch body WTT2 17V		W000306494
	Torch body WTT2 17		W000306492
	Torch body WTT2 26V		W000306499
	Torch body WTT2 26		W000306497
	Torch body WTT2 18W		W000306503
4	Insulating ring		W000306397
5	Collet	1.0	W000306411
		1.6	W000306412
		2.0	W000306413
		2.4	W000306414
		3.2	W000306415
		4.0	W000306416
6	Collet body	1.0	W000306380
		1.6	W000306381
		2.0	W000270781
		2.4	W000306382
		3.2	W000306383
		4.0	W000306384
7-1	Nozzle standard short 4	6.4	W000306423
	Nozzle standard short 5	8.0	W000306424
	Nozzle standard short 6	9.6	W000306425
	Nozzle standard short 7	11.2	W000306426
	Nozzle standard short 8	12.8	W000306427
	Nozzle standard short 10	16.0	W000306428
	Nozzle standard short 12	19.2	W000306461
7-2	Nozzle standard long 4L	6.4	W000306462
	Nozzle standard long 5L	8.0	W000306463
	Nozzle standard long 6L	9.6	W000306464
	Nozzle standard long 7L	11.2	W000306465

As standard for all models
As standard only for WTT2 17 EB / 17 RL / 17V
As standard only for WTT2 26 EB / 26 RL / 26V
As standard only for WTT2 18W EB / 18W RL

WTT2
17V / 17 (RL-EB)
26V / 26 (RL-EB)
18W (RL-EB)

		Ø	Cat. nr
1-1	Back cap - Short		W000306399
1-2	Back cap - Long		W000306403
2	Back cap O-ring		W000306405
3	Torch body WTT2 17V		W000306494
	Torch body WTT2 17		W000306492
	Torch body WTT2 26V		W000306499
	Torch body WTT2 26		W000306497
	Torch body WTT2 18W		W000306503
4	Insulating ring		W000306466
5	Collet	1.0	W000306411
		1.6	W000306412
		2.0	W000306413
		2.4	W000306414
		3.2	W000306415
		4.0	W000306416
6	Collet body	1.0	W000306389
		1.6	W000306390
		2.4	W000306391
		3.2	W000306392
		4.0	W000306393
7-1 Gas Lens	Nozzle gas lens short 4 GL	6.4	W000306434
	Nozzle gas lens short 5 GL	8.0	W000306435
	Nozzle gas lens short 6 GL	9.6	W000306436
	Nozzle gas lens short 7 GL	11.2	W000306437
	Nozzle gas lens short 8 GL	12.8	W000306438
	Nozzle gas lens short 11 GL	16.0	W000306439
7-2 Gas Lens	Nozzle gas lens long 4 GL L	8.0	W000306467
	Nozzle gas lens long 5 GL L	9.6	W000306468
	Nozzle gas lens long 6 GL L	11.2	W000306469
	Nozzle gas lens long 7 GL L	12.8	W000306470

GAS LENS VERSION
For a better gaseous protection



TUNGSTEN ELECTRODES

Warning: before use, carefully read the material safety data sheet on www.safety-welding.com

Electrode type	Metal type	Arc stability	Arc starting	Electrode lifetime	Thermal resistance
WP pure	Light alloy	**	*	*	*
WC 20 Cerium 2%	Steel and stainless steel	**	*	**	**
WL 20 Lanthanum 2%	Steel and stainless steel	**	***	***	***

*** Excellent ** Good * Suitable

2006-528

Standards
ISO 6848
EN 26848

Pack of 10, length 150 mm

	WP - Pure tungsten Light alloy (green end)		WC 20 - 2% cerium tungsten Steel and stainless steel (grey end)		WL 20 - 2% lanthanum tungsten Light alloy AC - Steel, stainless steel DC	
Ø	AC current (A)	Cat. nr	DC current (A)	Cat. nr	Current (A)	Cat. nr
1.0 mm	10-50	W000010009	10-84	W000010022	10-80	W000010373
1.6 mm	40-80	W000010010	52-136	W000010023	60-150	W000010016
2.0 mm	60-110	W000010011	94-199	W000010024	100-200	W000010017
2.4 mm	60-140	W000010012	136-262	W000010025	150-250	W000010018
3.0 mm	90-180	W000010013	178-315	W000010026	210-310	W000010019
3.2 mm	90-180	W000010014	178-315	W000335150	210-310	W000010020
4.0 mm	140-240	W000010015	262-420	W000010028	350-480	W000010021

REMOTE CONTROL BOXES - TROLLEYS

	SMARTY 180 / 220 XL	SMARTY TX 160 ALU	SMARTY TX 220 ALU
Remote control 10 m length	W000242069	W000242069	W000270325
Remote control pedal 10 m length	W000241602	W000241602	W000263314
Trolley	-	-	W000263308

MMA ACCESSORIES

Accessories	Length 3 m (25C50)	Length 4 m (35C50)
Arc kit 300 A	W000260684	W000011139

Connection Ø 13 mm

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